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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,016	11/26/2003	Ralph B. Danzl	P-10462.00	1783
27581	7590	07/14/2006	EXAMINER	
MEDTRONIC, INC. 710 MEDTRONIC PARK MINNEAPOLIS, MN 55432-9924			SMITH, STEPHANIE R	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,016

Applicant(s)

DANZL ET AL.

Examiner

Stephanie Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 13-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>14 February 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 13-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of manufacturing and a defibrillator, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on May 1, 2006.

Information Disclosure Statement

The information disclosure statement filed February 14, 2005 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the document number for the Beidler reference has not been cited, and an English translation for the foreign patent documents have not been provided. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Aiello et al (U.S. 5914522). With reference to claim 1, Aiello et al. disclose a semiconductor material that has an epitaxial layer that contains two electrodes and a vertical power transistor that has a collector electrode and a metal track that is in contact with the base region and emitter region (see column 3, lines 41-53). Aiello et al. disclose the transistor has a high breakdown voltage, typically greater than 200V (see column 2, lines 43-49). Referring to claims 2-3, Aiello et al. teach an active area in the epitaxial layer and a plurality of transistor cells formed in the epitaxial layer (see figures 2a and 3, elements 130, 220, 210, 120). Regarding claim 4, Aiello et al. teach that the semiconductor layer has a high impurity concentration and the epitaxial layer has a low concentration of impurities (see column 5, lines 55-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aiello et al. in view of Brendel et al (U.S. 2003/0213605). Aiello et al. disclose the invention described above, but do not disclose the deep trench exposing the substrate, that solder bumps are formed on the contact regions, a defibrillator having a housing or a substrate that couples the electrodes to the internal circuitry. With reference to claims 5 and 12, Brendel et al. disclose the trench and a first electrode contact region (see figure 20). Regarding claims 6 and 7, Aiello et al. disclose the semiconductor device described above. With regards to claims 8 and 9, Brendel et al. disclose that the filter assembly is to be used in an implantable defibrillator (see paragraph 42) and that solder is used to connect elements (see paragraphs 113-114). Referring to claim 11, a gold braze area is formed on the surface of the device (see paragraphs 113-114). The trench allows for better contact of the electrode, and using the device in an implantable defibrillator provides for the secure connections needed in order to properly sense and provide therapy. Solder is cost efficient and properly wets and bonds to metal. The

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metal layer provides for conductivity among elements. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the semiconductor device taught by Aiello et al. with the deep trench exposing the substrate, that solder bumps are formed on the contact regions, a defibrillator having a housing and a substrate that couples the electrodes to the internal circuitry as taught by Brendel et al. in order to allow for better contact of the electrode, provide for the secure connections needed in order to properly sense and provide therapy, solder is cost efficient and properly wets and bonds to metal, and the metal layer provides for conductivity among elements.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephanie Smith whose telephone number is 571-272-2834. The examiner can normally be reached on Monday-Friday between 7:30 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SRS



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